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AFFORDABLE HOUSING FOR RURAL ALBERTA - A NEW APPROACH

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Prepared by:

Dale B. Shudra
for
Laebon Developments Ltd.

The views and conclusions expressed and the recommendations made in this report are entirely those of the authors and should not be construed as expressing the opinions of Alberta Municipal Affairs.

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FOREWORD

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Innovative Housing Grants Program
Alberta Municipal Affairs
Housing Division
Research and Development Section
16th Floor, CityCentre
10155 - 102 Street
Edmonton, Alberta
T5J 4L4

Telephone: (403) 427-8150

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EXECUTIVE SUMMARY

GENERAL

This study was conducted to examine a new approach to home construction in rural Alberta (population less than 10,000) wherein an owner would work in a cooperative manner with a professional contractor to construct his home. This approach would require a professional contractor (or other central source) to develop a product specifically aimed at the rural market and such product must be flexible and allow owner-involvement.

THE MARKET

Although there is a definite trend towards urbanization in Alberta and although the growth rate in Alberta may not be as dramatic in the forthcoming decade as the past decade, the rural market is alive and well- and actually growing in real numbers. It is estimated 450 houses will be built per annum within an area serviceable from Red Deer.

THE PRODUCT

The proposed product is a number of packages which together represent all the required components to construct a house. The owner can select the packages he desires to handle himself, or through his own sources, while allowing the contractor to handle the balance of packages.

THE SURVEY

To better define the rural market a telephone survey was conducted with targets being a town, a village, a hamlet and a county. The results confirm a potential market currently served by local contractors and "do-it-yourselfers". Some people are purchasing rather than building because of lack of professional builders or the absence of a builder on New Home Warranty Program (N.H.W.P.)

THEORY

A competitive analysis was performed and includes the motivations of owner-builders. Since competition is varied, as are the motivations and needs of prospects, a package should be designed offering value in several areas of anticipated buyer needs. The more alternatives that are offered, the greater the likelihood the contractor would be selected by the owner to assist in construction.

RECOMMENDATIONS

1. There is a target market worth pursuing from a centre such as Red Deer with 450 homes being built per annum in the surrounding region. Of these, approximately 300 homes per annum are in the market segment this product is aimed at.

2. The strategy to pursue the target market would require significant marketing efforts to make the product well-known and intensive efforts by a trained salesforce to educate owners on benefits of the product.

3. The recommended product would have 15 packages and it is anticipated, based on survey results, that the contractor would handle the majority.

4. Initial efforts and capital inputs will be directed to producing a marketable product and creating efficient operations to deliver that product.

5. The product is labour intensive from the perspective that salesforce and operations staff will be required to spend large amounts of time with the owner. This fact, combined with necessary travel costs, will require an efficient operation or a competitive product will not be deliverable.

6. New Home Warranty might be available if a registered builder is involved with construction to a sufficient degree. This fact alone significantly differentiates the product from present offerings and might be a determinative factor if high-ratio financing is sought.

7. A sequenced expansion is advised which should quickly be supported by cash-flow.

8. Reasonable sales projections for the first three years of operations are 15, 30, and 45 houses per annum respectively, with a break-even point of 25 houses the 1st year and 27 the next.

9. If this concept proves successful, operations could be expanded to other areas of the province resulting in economy of scale. If sales of 100 homes per annum could be attained, consideration could then be given to prefabricating of walls and trusses or other diversification. This would be risky as an initial strategy due to the high initial investment required for an unproven product.

10. Pricing of the product would require at least a 15% contractor markup on each package delivered to maintain a profitable venture. The owner must be convinced he is receiving value for his money and thus there is a need for design assistance, a trained salesforce, efficient operations, good service and warranty, and marketing efforts.

CONCLUSION

The product developed is flexible, of value to an owner-builder, and allows owner-involvement while still being cost efficient and timely. Implementation of this strategy should create a competitive advantage and enable a new venture to capture a significant portion of a sizeable market.

1.0 Introduction

This study examines a new approach to home construction in the rural market in Alberta. The owner-builder is responsible for a large portion of new home construction in rural areas. However, this type of construction is often affected by a number of problems which the involvement of a professional builder would mitigate. This study seeks to define a method by which the owner-builder can maintain control of the building process but can receive on-going professional support and services in any area of the building process.

The essential concept that this research seeks to develop is that a professional builder with capabilities spanning the entire building process can offer one or all of the services integral to the building process to an owner-builder. The owner-builder could then undertake those services which he decides to tackle while receiving assistance to complete the balance of services. This would greatly simplify home construction for the owner-builder as he would only have to deal with one firm throughout the building process. As well, depending on the extent of professional involvement, the builder may be able to apply the New Home Warranty to the home at the end of construction.

The research is focused on developing a feasible method of operationalizing this concept of professional assistance. Specific objectives are:

1. To examine the rural home market with a focus on the owner-builder component.

2. To identify the range and specificity of services which are typically required by the owner-builder.

3. To consider service delivery mechanisms which a professional builder could supply.

4. To assess the economic viability of various services and combinations thereof, considering such aspects as distance effectiveness, required volumes of work, continuity of service elements and similiar factors.

5. To assess the extent of builder involvement required in order to enable New Home Warranty coverage of owner led rural home construction.

Assessment of the owner-builder begins with designation of a study area. The housing characteristics of various sub markets within the area are then noted. This is followed by consideration of the characteristics and motivations of the owner-builder. Some preliminary service packages which a professional builder could offer are then presented. Present supply options of the owner-builder are then examined followed with a brief review of the New Home Warranty Program to assess how this relates to the service concept envisioned.

A survey was designed to explore characteristics of the owner-builder market as well as receive feedback on proposed service packages. Results of this survey are analyzed and summarized. The proposed service packages are then examined in more detail with respect to economic feasibility and marketing considerations, taking into account survey results. The study concludes with a plan to implement the proposed package.

2.0 THE RURAL OWNER-BUILDER

The "do-it-yourselfer" or owner-builder accounts for a particularly significant proportion of construction in the rural area of the province. Farmers have traditionally built their own homes and many others also undertake their own construction.

The reasons for owner-builder construction vary according to the individuals circumstance. However the primary motivation is often the perception that they will avoid high labour costs. A desire for more control of the design and building process is an important contributing factor. Lastly, an absence of qualified trades people and full service builders in rural areas often dictates that he must undertake his own construction.

The building of a home on one's own is often significantly more complicated and less cost effective than is first assumed. Depending on the talents that the individual brings to the task, there are off-setting factors which can mitigate against both the goals of labour saving and increased control.

Owner-builders usually lack familiarity with current design and technology. As a consequence they may select plans which are less cost effective than a professional builder might recommend. Similarly they are often not aware of the most recent cost saving construction techniques or products. Secondly, the homes which they choose to build can suffer from design and technology cost disadvantages.

In hiring sub-trades the owner-builder is also at a disadvantage. They are not as familiar with current costs, time requirements, quality considerations or performance reputations of the various trades. They are less able to command appropriate prices or to secure the trades when required. Accordingly, owner led construction is often plagued by long construction delays as the absence of a trade in the proper sequence of building upsets the scheduling of all subsequent trades.

Owner-builders are also less able to secure the best prices from material suppliers. They do not receive contractor discounts. As they are only building one house they do not receive priority in service or quality of product.

Budget overruns due to in-process changes, upgrades or inexperienced wage labour are also problems. These can diminish the quality of the final product and lead to difficulties with lenders.

3.0 A NEW APPROACH

Builder assisted owner construction offers a new option in home construction. Drawing on the professionals experience, labour and suppliers, an owner-builder can circumvent many of the problems in owner involved construction.

The suggested product differs from the conventional product offered by residential builders since it proposes to make available a package which can include as much or as little of a home as an owner-builder wishes. The key to the difference is that a builder could offer a complete home, or a material package, or any component of a home that might be requested. A builder, offering this new approach, would require the ability to offer to the customer a complete range of services and materials. He would have to provide a one- stop shopping service with the ability to give step-by-step assistance to each owner-builder including financial planning, building design, subtrades, finishing and warranty.

With the customer in control of the subtrade and supplier selection, a high degree of flexibility is achieved. Every customer has unique requirements, desires and needs. A number of service packages which generally follow a natural progression of construction were initially conceived to test this approach. This is not necessarily the marketing sequence. The builder could adjust his offering to suit the needs of the specific owner-builder. If the owner-builder elects to do any of the work himself, or hire a subtrade unknown to the builder, the builder would be required to inspect the quality of work (in addition to inspections required by regulatory authorities). Construction would continue after the approval of the inspection. Preliminary concept packages are presented in the following sections.

3.1 Package #1. Building Shell

Detailed checklist:

- Blueprints
- Beams, teleposts, joists and subfloor
- Exterior and interior walls and trusses
- Exterior wall sheathing
- Windows and exterior doors
- Insulation, poly, and drywall
- Exterior siding, soffit, fascia, eavestroughing
- Roof sheathing and shingles
- All miscellaneous nails and hardware

Most owner-builders, while knowing what type of home they want to build, have little idea of practicality or cost. Blueprints would be provided with the design and style that best suits the owner-builder. Once the types of materials and the available options are selected, the builder can estimate the quantity and costs of the materials package. A separate quote on the labour needed to build the home will also be given. In this stage of negotiation, the owner-builder will be offered the option of supplying some of the materials and/or doing some of the work himself. It is likely that the builder would supply most of the materials and labour because of the customers inability to acquire them at the builders volume prices. Approximately 30% of the constructed project is represented by this stage.

3.2 Package #2. Site and Foundation Services

Detailed checklist:

- Surveying certificate and stakeout
- Site clearing, excavation, and backfill
- Removal or placement of landfill
- Gravel or concrete footings
- Wood or concrete foundation
- Tar, gravel, drainage tile, and sump
- Sand or gravel fill for floor

Package #2 would be an offering to the owner-builder of various add-on materials and labour packages. The owner-builder has the advantage of utilizing the builder's access to foundation contractors and excavation equipment. The builders expertise could be well used in site selection, directional exposure, survey and site selection. This phase represents approximately 17% of the total constructed project.

3.3 Package #3. Electrical Services

Detailed checklist:

- Power service installation
- Telephone service installation
- Electrical fixtures and appliances
- Security alarm systems
- Intercom systems

Package #3 is the electrical sub-contract, the first of the major subtrades. The owner-builder may hire the electrical subtrade locally or choose to hire the subtrade used by the builder. We feel the builders' subtrade will often be hired because of better pricing, selection and quality control. The electrical sub-contract represents approximately 5% of the completed project.

3.4 Package #4. Plumbing Services.

Detailed checklist:

- Septic systems
- Water service installations
- Plumbing fixtures with all options
- Ceramic tile

Many owner-builders are not aware of the many products available. Often, if aware of the products, they do not have competitive access to them. Any options, from colored fixtures to whirlpool tubs, desired by the owner-builder, can be supplied. The plumbing sub-contract represents approximately 6% of the completed project.

3.5 Package #5. Mechanical Services

Detailed checklist:

- Furnaces and ductwork
- Hot water heating
- Solar heating
- Power humidifiers
- Air conditioning

Many different furnaces and heating types can be specified by the owner-builder. There are many considerations such as fuel type, cost efficiency, and comfort. This area should explore energy efficiency, and potential savings of various energy saving measures. The heating sub-contract represents approximately 5% of the completed project.

In proposals #3, #4, and #5, unless the owner-builder is qualified to complete the work, he will most likely contract the work to qualified tradesmen. The owner-builder may hire the builder to complete any or all of the major subtrades. By employing tradesmen who specialize in new home construction and who handle a large volume of work, the builder can offer these services less expensively than the local tradesmen who often do the work for owner-builders in rural areas.

3.6 Package #6. Painting

Detailed checklist:

- Sealing and painting drywall
- Staining or painting interior doors
- Staining or painting railing and other woodwork
- Staining or painting exterior doors and windows
- Staining or painting sundecks

Exterior paint/finish will be supplied where applicable. This is another stage of the building process that the owner-builder often wishes to complete himself. Often, owner-builders assume they are qualified to do this work, and have no concept of the amount of work involved to obtain a quality product. The painting contract represents approximately 5% of the value of the final project.

3.7 Package #7. Cabinets and vanities

Detailed checklist:

- Supply and installation of kitchen cabinets
- Supply and installation of bathroom cabinets
- Kitchen and bathroom counter tops

A builder usually uses one supplier consistently for cabinets. This gives him greater buying power and enables him to demand follow up service and warranty for his product. Cabinets are an area where quality control is hard to maintain. Kitchen cabinets, vanities, and countertops represent approximately 6% of the completed project.

3.8 PACKAGE #8. Floor Finish

Detailed checklist:

- Supply and installation of carpets and underlay
- Supply and installation of linoleum
- Quarry tile
- Hardwood flooring

Floor finishing represents approximately 5% of the completed project.

Again, the builder by making volume purchases can offer the owner-builder many benefits. In the case of kitchen cabinets and floor coverings, a builder can offer an excellent and wide range of products at lower prices. Volume purchases by the builder also guarantees quick warranty action by the supplier.

3.9 PACKAGE #9. Interior finish

Detailed checklist:

- Linoleum underlayment
- Interior doors, casing and baseboard
- Closet shelving and hardware
- Banisters
- Fireplace and finish
- Panelling
- Bathroom hardware
- All nails and hardware

There are a wide range of options available to the owner-builder in finishing his home to reflect his specific tastes. The finishing stages of the construction project are important and encompass many job descriptions. Qualified finishing carpenters are hard to find in the rural areas. A professional builder would have people on staff capable of doing quality work. Quality control, always important, is even more critical at this stage. The finishing stage of construction represents approximately 15% of the completed project.

3.10 Package #10. Exterior completion

Detailed checklist:

- Parging
- Front and rear steps
- Sidewalks
- Driveway
- Grading and Landscaping

Package #10 includes all exterior finishing to completion. It is possible that some of these services may be delayed over the winter season and completed the following spring. Garage and fence options may be included at the discretion of the owner-builder. This completion stage of construction represents approximately 6% of the completed project.

4.0 PRESENT SOURCES OF SUPPLY AND INFORMATION FOR THE OWNER-BUILDER

4.1 Pre-manufactured Homes Packages

One option available to the owner-builder is the pre-manufactured home supplier. These companies offer material packages that have the interior and exterior walls pre-manufactured into sections, which are transported to the building site. Pre-maufactured home companies attract their customers with a homes catalogue. The owner-builder may make changes to the suggested plans or design a custom plan of their own. The manufacturer guarantees that there is adequate material to build the home and helps the customer with some of the subtrade tendering. The company does not guarantee the workmanship needed to erect the structure and complete the home, nor does it specify the costs of each of the various subtrades. The cost of pre-manufacturing is justifiable at times, but there is a premium paid by the owner-builder.

The procedure for buying a pre-manufactured home begins with design service. The owner-builder, after purchasing the package, takes the blueprints to various subtrades for pricing. He then hires the subtrades and begins construction. The home package that the owner-builder purchases usually arrives in two separate loads. The first load includes all the framing materials up to but not including the windows. If the home is to be built on a wood foundation these materials would be included. The disadvantages of this system of delivery is that the owner-builder must work around all of the material and be on guard against theft. The second load contains the windows, insulation, drywall, siding, soffit and the finishing materials required to complete the home. These packages do not supply electrical, plumbing, heating, or painting materials. The only interest of the pre-manufactured home supplier is in selling a materials package. There is little follow up or warranty beyond the actual materials supplied.

4.2 Building Material Suppliers

Another supplier to the do-it-yourself home builder is the local building supplies dealer or lumber yard. Local building suppliers do not draft blueprints but most dealers sell plan books. An owner-builder can bring his blueprints to the dealer for a quotation on the materials. The lumber dealer will then give the customer an estimation of the quantities and costs on the materials that the customer should need to build the home. After credit arrangements have been made, materials are shipped to the job site as the owner-builder requires them. There are no guarantees that there will be sufficient material to complete the project. Usually their assistance ends here.

4.3 Other Rural New Home Suppliers

To the writer's knowledge, there are at present no builders in Alberta that deliver the contemplated concept of owner-builder and contractor relationship. There are few full service builders available in the rural market that function with a full network of subtrades and they are rarely well versed in new home technology and energy conservation. Often the general contractor in the rural market place functions merely as a job superintendent.

4.4 Foreign Rural New Home Supplier

The only known foreign company which offers some of the services that this study envisions is an American firm, Miles Homes of Minneapolis, Minnesota. Miles Homes has a program that assists the home buyer in three main areas needed to build a new home; finances, construction skills and property. Construction financing is available for periods of 18 to 24 months. Monthly interest payments are made with the balance paid from the proceeds of the permanent mortgage. Miles Homes does not supply permanent financing. They supply the owner-builder with a stick materials package or can pre-cut the materials for easier erection. Additional assistance is provided with detailed, illustrated, step-by-step instruction manuals. Miles Homes will assist the owner-builder in locating land to build or help the owner-builder bridge finance so he can begin construction before the land has been paid out. Interim financing is far more difficult to obtain in the U.S.A. than in Alberta.

5.0 THE STUDY AREAS

In order to test the concept on prospective rural home buyers a further examination of rural markets through a survey was undertaken. A typical cross section of the rural housing market was chosen for study. The Town of Stettler, the Village of Erskine, the Hamlet of Delburne, and the County of Stettler were selected. These municipalities are located east of Red Deer and were chosen for study because they are relatively distant from major markets and should provide a reasonable basis for generalization to other rural markets.

The Town of Stettler is located approximately 80 kms. east of Red Deer and has a population of 5,147 people. Stettler is the service center for a large trading area, and the site of approximately 132 retail and manufacturing facilities. Stettler has been a stable and growing community for many years and continues to grow at a steady rate. From the years 1979 to 1987, Stettler has shown a population growth of 9.8%. In 1981 there was a trading area population of 36,200 people.

The Village of Delburne is a small farm community located 45 kms. south-east of Red Deer. Since 1979, Delburne has had a population growth of approximately 10.5%. In 1989, Delburne, with its population of 574 people celebrates it's 75th anniversary.

The Hamlet of Erskine is located approximately 70 kms east of Red Deer on Highway No.12. Erskine experienced a stagnant growth rate in the ten years between 1966 and 1976 but a healthy growth rate since. The population in 1986 was 284 people.

The County of Stettler has a population of 5,198 people. It is primarily an agricultural region although a strong oil and gas industry are of growing importance. The general economic conditions are somewhat favorable and the housing market appears to be strengthening. When grain prices firm up, farmers should start spending more freely. From the years 1979 to 1986 the County of Stettler has had a population growth of approximately 5.6%.

6.0 HOUSING CHARACTERISTICS WITHIN THE DESIGNATED STUDY AREAS

6.1 Stettler

Status as a town was granted to Stettler in 1906. Stettler has been a farm service and supply centre for many years and still derives a good part of it's economic strength from the agricultural industry. The characteristics of the town of Stettler and it's farm community are typical of a mature business environment. Stettler consists of an older downtown core with approximately 40% of the population living in newer subdivisions on the southwest corner of the town. There is evidence of housing within the older core being torn down to accomodate newer housing.

There were a total of 1,310 owned homes in 1986 and 620 rented for a total of 1,930 private dwellings. Within this total, 1,410 were single detached residences, 95 were movable dwellings and 425 were all other types including apartments. A typical 1,050 square foot three bedroom home with detached garage in Stettler sells for about $74,500.00.

The rental vacancy rate in Stettler is 6.5 percent. A two bedroom apartment rents for an average of $395.00 and three bedrooms rent for an average of $439.00 per month. Single family dwellings command a greater rental rate. The demand for rental housing appears strong.

To the end of 1987, there were 16 single family residence building permits issued. Do-it-yourself owner-builders had applied for 14 of those permits while two permits were taken out by contractors.

6.2 Delburne

Delburne is situated in the County of Red Deer and has 235 occupied private dwellings and a rental vacancy rate under one percent. There were two single family dwelling permits issued in 1987. Both new homes were built by their owners. A typical 1,000 square foot bungalow, 25 years old, sells for about $51,900.00. There is more construction activity in the rural area surrounding Delburne than within the Village itself.

6.3 Erskine

From the years 1981 to 1986 there has been a population growth of approximately three percent to a present population of 284 people. The land use in Erskine is primarily residential. Being situated only 10 km. from Stettler, it relies quite heavily on Stettlers' retail and service facilities. There is little industrial or commercial development in Erskine, and all of this development is service oriented. According to an Area Structure Plan compiled by The Red Deer Planning Commission, the residents' overall preference is for a community which is primarily residential. Alberta Gas Ethylene has indicated that there is a possibility of a petro-chemical plant to be built just west of Erskine which would employ approximately 100 people. If some of the workers choose to live in Erskine, it could have an impact on the hamlet.

6.4 The County of Stettler

The County of Stettler consists of 4,016.49 square kilometres and has a population density of 1.3 people per square kilometre. The total number of occupied private dwellings in the County of Stettler in 1986 was 1,610. Specifically, 1,430 are single detached homes and 175 are movable dwellings. Of these 1,390 were owned and 220 were rented. Within the County there are 2100 farm residences and 200 acreage residences. The average age of the housing stock in the county of Stettler is 26 years.

In 1987 there were 55 building permits issued, and of these sixteen were for single family residences. All of the building permits issued in 1987 for new residences were issued to owner-builders. Mobile homes accounted for approximately 15 of the issued permits. Price information is difficult to access in a strictly rural context as the amount and quality of land associated with a residence varies considerably.

7.0 Survey Design

Prior to designing the survey itself, consideration was given to how the data should be collected. Methods considered included door to door interviews, mall interviews, contacting owner/builders directly and mail questionnaires. The services of Clayton Research Associates Ltd. in Calgary were retained and their recommendation of utilizing a telephone survey followed.

It was decided a 5% ratio was appropriate for the survey. Since the target market areas encompassed 4000 owned residences, 200 completed interviews would be appropriate. It was decided to complete 400 interviews to ensure a thorough survey.

The 400 planned interviews were divided according to the population of each sub-market as follows:

a) Town of Stettler - 175 interviews
b) County of Stettler - 165 interviews
c) Village of Delburne - 50 interviews
d) Hamlet of Erkskine - 10 interviews

The survey was designed after consultation with Clayton Research Associates Ltd. and follows as Appendix 1. The telephone survey was designed to determine the potential market for contemplated services as well as the receptivity of this market to the proposed concept. The survey was conducted and completed within a one week period.

Appendix I is a copy of the survey questionaire utilized by telephone canvasers. The questions are directed at determining home building and home purchasing activity in the study area. From that, specific questions are directed at owner involvement in the construction process. Lastly, questions are directed at interest in the contemplated assistance package. The results of the survey by community are contained in Appendix II.

8.0 Summary and Analysis of Survey Results

8.1 Building vs. Purchasing

More than 3 times as many respondents built their new home as opposed to purchasing an existing home. (Table 8.1). This seems logical as many respondents are limited as to where they wish to move and existing houses are not always available. Of the families planning to move in the next few years, 12 families planned to build their new home while 10 planned to purchase their next home. (Table 8.2). Aside from these comments, no trends could be drawn from a comparision of the submarkets. Even if trends could be drawn, they would be somewhat suspect since the sample sizes in Erskine and Delburne are small.

TABLE 8.1: Number of respondents who had recently built a home or purchased an existing home

	Replies	Built		Purchased	
Stettler	175	14	(8.0%)	4	(2.3%)
County of Stettler	165	17	(10.3%)	5	(3.0%)
Delburne	50	8	(16.0%)	2	(4.0%)
Erskine	10	2	(20.0%)	2	(20.0%)
Total	400	41	(10.1%)	13	(3.2%)

TABLE 8.2: Number of respondents who plan to build or purchase a new home in the next few years

	Replies	Plan to build		Plan to purchase	
Stettler	175	8	(4.6%)	5	(2.9%)
County of Stettler	165	1	(1.2%)	3	(1.8%)
Delburne	50	2	(4.0%)	2	(4.0%)
Erskine	10	0	(0.0%)	0	(0.0%)
Total	400	12	(3.0%)	10	(2.5%)

8.2 Owner-Builder vs. Professional Builder

Of the 41 respondents who had built a new home, the majority (68%) acted as their own contractor with the minority (32%) utilizing a professional builder as general contractor. (Table 8.3). As expected, the likelihood of the owner acting as builder increased as you moved from the Town of Stettler to the Village of Delburne and was greatest for the County of Stettler.

TABLE 8.3: Owner built vs. professionally built homes

	Replies	Professionally Built		Owner Built	
Stettler	14	8	(57%)	6	(43%)
County of Stettler	17	2	(12%)	15	(88%)
Delburne	8	2	(25%)	6	(75%)
Erskine	2	1	(50%)	1	(50%)
Total	41	13	(32%)	28	(68%)

The same trend was evident for those 14 families planning to build in the future. The majority (67%) plan to act as their own general contractors while the minority (33%) will use a professional builder. (Table 8.4). The sample size is not large enough, to allow a meaningful comparison of sub-markets.

TABLE 8.4: If you build, would you hire a professional contractor or be your own general contractor?

	Replies	Owner Contractor		Professional Contractor	
Stettler	8	5	(63%)	3	(37%)
County of Stettler	5	5	(100%)	0	(0%)
Delburne	2	1	(50%)	1	(50%)
Erskine	0	0	(0%)	0	(0%)
Total	12	8	(67%)	4	(33%)

8.3 Would Availability of a Professional Builder to Assist in the Building Process Make a Difference?

Survey results reveal that the availability of a professional builder to assist in the building process would have an impact.

Of the 13 respondents who had recently purchased a home, 6 (46%) would have built, rather than purchase, if a professional builder had been available to assist in constuction. (Table 8.5).

TABLE 8.5: Rather than purchase existing home would you have built if professional help had been available?

	Replies	Yes		No	
Stettler	4	1	(25%)	3	(75%)
County of Stettler	5	4	(80%)	1	(20%)
Delburne	2	1	(50%)	1	(50%)
Erskine	2	0	(0%)	2	(100%)
Total	13	6	(46%)	7	(54%)

Of the 378 respondents who do not intend to build in the near future, 68 (18%) stated they would build a home if professional help were available to assist them. If accurate, this is significant as it would reveal that there are a significant number of families interested in building who are not considering building because of the unavailability of professional assistance. (Table 8.6).

TABLE 8.6: People who are not planning to build but would consider building if a professional contractor were available to assist.

	Replies	Would Consider		Would Not Consider	
Stettler	162	20	(12%)	142	(88%)
County of Stettler	160	37	(23%)	123	(77%)
Delburne	46	8	(17%)	38	(83%)
Erskine	10	3	(30%)	7	(70%)
Total	378	68	(18%)	310	(82%)

8.4 Availability of New Home Warranty Program

One can conclude from our survey that if a certified builder was involved and New Home Warranty Program coverage extended, more families would be interested in building their own home. Of the 99 respondents who answered this question, 65 (66%) would be interested in builder assistance from a professional. 22 would not be interested and 12 were unsure if this would effect their plans. (Table 8.7).

TABLE 8.7: People who are not planning to build but would reconsider if New Home Warranty coverage were available

	Replies	Would Reconsider	Not Interested	Uncertain
Stettler	31	20	9	2
County of Stettler	49	36	7	6
Delburne	16	8	5	3
Erskine	3	1	1	1
Total	99	65 (66%)	22 (22%)	12 (12%)

8.5 Activities Owner Builder Would Handle Themselves

Table 8.8 lists activities owners would consider doing themselves in descending order, beginning with painting as most often selected and ending with home package set-up as least desirable. These aggregate results were interesting as it was predicted that certain activities (eg. painting) would be considered by at least 50% of the respondents. It was somewhat surprising that certain items (eg. plumbing and electrical) were only being considered by less than 15% of the respondents.

8.6 Summary

Based on analysis of the surveys:

1. In rural areas, more families build homes than purchase existing homes.

2. Of the families planning to move, more families are considering building a new home than are considering purchasing an existing home.

3. Of the families who have built as well as those intending to build, the majority plan to act as their own general contractors.

4. A significant portion of families who puchased homes would have built instead if professional assistance were available to assist them.

5. Nearly 1/5th of the families who do not plan on building or buying a home would consider building a home if professional help were available.

6. The availability of New Home Certification coverage would make building more attractive for the rural builder/owner.

7. The activities which owners are prepared to do themselves are quite diverse and by no means unanimous. In most cases, the professional builder assistance component would be substantial.

Table 8.8 Activities Owner, Family Members Or Friends Plan To Do Themselves

Activity	Stettler (56)	Delburne (32)	Erskine (10)	County (87)	Total (185)
Painting	37.5% (21)	21.8% (7)	20% (2)	40% (35)	35.1% (65)
Roofing	33.9% (19)	3.1% (1)	10% (1)	31% (27)	25.9% (48)
Framing	39.3% (22)	9.4% (3)	10% (1)	22% (19)	24.3% (45)
Insulation	23.2% (13)	3.1% (1)	10% (1)	33% (29)	23.8% (44)
Drywall Boarding	28.6% (16)	6.3% (2)	10% (1)	22% (19)	20.5% (38)
Siding Exterior Finish	21.4% (12)	3.1% (1)	10% (1)	28% (24)	20.5% (38)
Parging, Sidewalks, Driveway	19.6% (11)	3.1% (1)	20% (2)	26% (23)	20% (37)
Drywall Finishing	33.9% (19)	6.3% (2)	10% (1)	13% (15)	20% (37)
Planning & Drawings	19.6% (11)	3.1% (1)	10% (1)	24% (21)	18.4% (34)
Site Preparation	14.3% (8)	9.4% (3)	10% (1)	23% (20)	17.3% (32)
Excavation/Backfill	16.1% (9)	6.3% (2)	10% (1)	17% (15)	14.6% (27)
Electrical	19.6% (11)	12.5% (4)	0% (0)	10% (9)	13% (24)
Concrete Basement	21.4% (12)	9.4% (3)	0% (0)	7% (6)	11.4% (21)
Wood Basement	19.6% (11)	3.1% (1)	10% (1)	8% (7)	10.8% (20)
Floor Coverings	16.1% (9)	9.4% (3)	20% (2)	6% (5)	10.2% (19)
Plumbing	12.5% (7)	9.4% (3)	0% (0)	9% (8)	9.7% (18)
Kitchen/Bathroom Cabinets	19.6% (11)	0% (0)	0% (0)	6% (5)	8.6% (16)
Heating	5.4% (3)	0% (0)	0% (0)	9% (8)	5.9% (11)
Home Package Set Up	21.4% (12)	0% (0)	0% (0)	3% (3)	.8% (15)

9.0 DEMOGRAPHIC INFORMATION

Prior to assessing the economic viability of any proposed package, the study areas must be examined in more detail to determine potential market size.

9.1 STUDY SAMPLE

Analysis for the balance of this paper will utilize census divisions with 1981 boundaries. The 1981 Census divides Alberta into 15 census divisions. Figure 9.1 is the Census Division Map.

Since this study is being conducted from Red Deer and the survey conducted in nearby areas, special emphasis will be placed on Divisions 7 & 8 (see Figure 9.1). These divisions encompass the area approximately 45 miles north of Red Deer to 30 miles south of Red Deer and from the east provincial boundary westward to the national park boundaries, an area serviceable from Red Deer.

9.2 DIVISION PROFILES

TABLE 9.1 CENSUS DIVISION CHARACTERISTICS

	Division 7	Division 8	Provincial Total or Average
1976 Population	37,866	95,384	1,838,037
1986 Population	40,680	132,610	2,365,825
10 yr % Change (Rank)	7.4%(14)	39.0%(2)	28.7%
% Change Rural	0%	73%	19%
% Change Urban	24%	-2%	32%
% Population- Rural	63.4%	32.2%	22.4%
Rural < than 5,000	87.3%	42.2%	29.8%
Rural & < than 10,000	100.0%	59.0%	34.7%
Ranking by Density	10th	4th	---
% in Mobile Homes-1981	11.4%	11.1%	5.3%
-1986	5.6%	6.6%	3.1%
In areas <10,000(1981)	11.4%	15.6%	12.3%
% in Single Detached Dwellings- 1981	79.1%	64.0%	61.8%
- 1986	85.7%	65.1%	63.2%
In Areas <10,000(1981)	79.1%	71.6%	74.2%

9.3 DIVISION 7 ANALYSIS

Division 7 is the area beginning at the Saskatchewan border and extending westward to 35 miles east of Red Deer. Division 7 is a low density, primarily rural area with no centres over 10,000 people. From 1976 to 1986, population growth was 7.4%, the second lowest growth rate of the 15 divisions. Rural population (less than 2,000) remained constant while urban population (areas greater than 2,000 and less than 10,000) increased 24%. Division 7 ranks 10th in terms of population density.

The percentage of occupants in mobile homes is higher than the provincial average and steadily declining as is the provincial average. The percentage of occupants in single detached dwellings at 87.5% is the third highest in the province and well above the provincial average of 63.2%. This is consistent with the fact that areas of less than 10,000 people have less apartment dwellers and more private dwellings occupants.

In Division 7 the only areas not considered rural are Stettler (5,147) and Wainwright (4,665).

9.4 DIVISION 8 ANALYSIS

Division 8 is more populous and enjoyed a 39.0% 10 year growth rate, the second highest in the province. The population is approximately 1/3 rural but almost 60% of the population lives in areas of less than 10,000 people. The only city is Red Deer. Towns with population between 5,000 and 10,000 are Lacombe (6,080), Innisfail (5,535), Ponoka (5,473) and Rocky Mountain House (5,183). The only town with less than 5,000 and more than 2,000 is Sylvan Lake (3,937).

In areas of less than 10,000 people, the percentage of occupants in mobile homes was 15.6% (3.3% higher than the provincial average) while private dwellings stood at 71.6% (2.6% below the provincial average).

9.5 BUILDING ACTIVITY IN DIVISIONS 7 & 8

Table 9.2 details single detached dwelling building permits issued in Divisions 7 & 8 for each of the years 1981-86. By removing activity in the city of Red Deer, all data refers to areas of less than 10,000 people. The assumption was made that 6% of the permits were for mobile homes.

In Division 7, average single detached dwelling building permits issued per annum are as follows:

- Stettler	14
- Wainwright	19
- Rural	47
Total	80

In Division 8, average single detached dwelling building permits issued per annum are as follows:

- Innisfail	21
- Lacombe	32
- Ponoka	23
- Rocky Mtn.Hse.	16
- Sylvan Lake	12
- Rural	204
Total	308

9.6 POTENTIAL MARKET SIZE

Assuming 388 single family homes are built annually in Divisions 7 & 8 (excluding the city of Red Deer), a sizeable market exists for the proposed package. By extending the survey results, 68.2% or 264 of the building permits would be taken out by the owner rather than a builder/contractor. This does not conclusively indicate the home is owner built as some owners take out the permit on behalf of a contractor. Further, the owner would likely take out his own permit if purchasing a prefab home (eg. a Nelson home package). In any event, each of the estimated 264 permits annually taken is a potential purchaser of the proposed package.

In addition to the above, one must consider the following:

a) Some of the home owners who utilized builder/ contractors might prefer the service packages offered. An estimated 123 permits (31.7% of homes built) will be taken out for primarily presold homes. Some of these 123 purchasers might prefer the proposed package to using a current builder.

b) Nearly 50% of the 13 respondents who had purchased rather than built stated they would have built if a professional builder had been available to assist in construction (Table 8.5). If this element of the population builds rather than purchases this could decrease the price of existing stock in areas with little demand or many listings. Ultimately, lower prices will result in an equilibrium being reached.

c) Many families who do not presently intend to build would potentially build if professional assistance were available and, particularly, if the New Home Warranty were offered. (Tables 8.6 & 8.7).

TABLE 9.2 : SINGLE DETACHED DWELLING BUILDING PERMITS ISSUED IN DIVISIONS 7 & 8 BY SIZE GROUP

	1981	1982	1983	1984	1985	1986	Average Permits Per/Yr.	Less 6% Mobile
DIVISION 7	141	60	102	70	78	73	87	82
DIVISION 8	1009	627	645	424	354	466	587	552
-less than 10,000 people	495	378	387	292	186	233	328	308
DIVISION 7 - by size group								
5000-9999 Stettler	28	5	14	8	14	18	15	14
2000-4999 Wainwright	36	16	39	2	3	24	20	19
RURAL	77	39	49	50	51	31	50	47
DIVISION 8 - by size group								
5000-9999 Innisfail	55	16	24	12	9	16	22	21
Lacombe	87	58	24	1	13	20	34	32
Ponoka	34	23	24	17	24	22	24	23
Rocky Mtn H.	9	27	19	23	11	13	17	16
Total	185	124	91	53	57	71	97	92
2000-4999 Sylvan Lake	22	18	13	8	12	6	13	12
RURAL	288	236	283	221	117	156	217	204

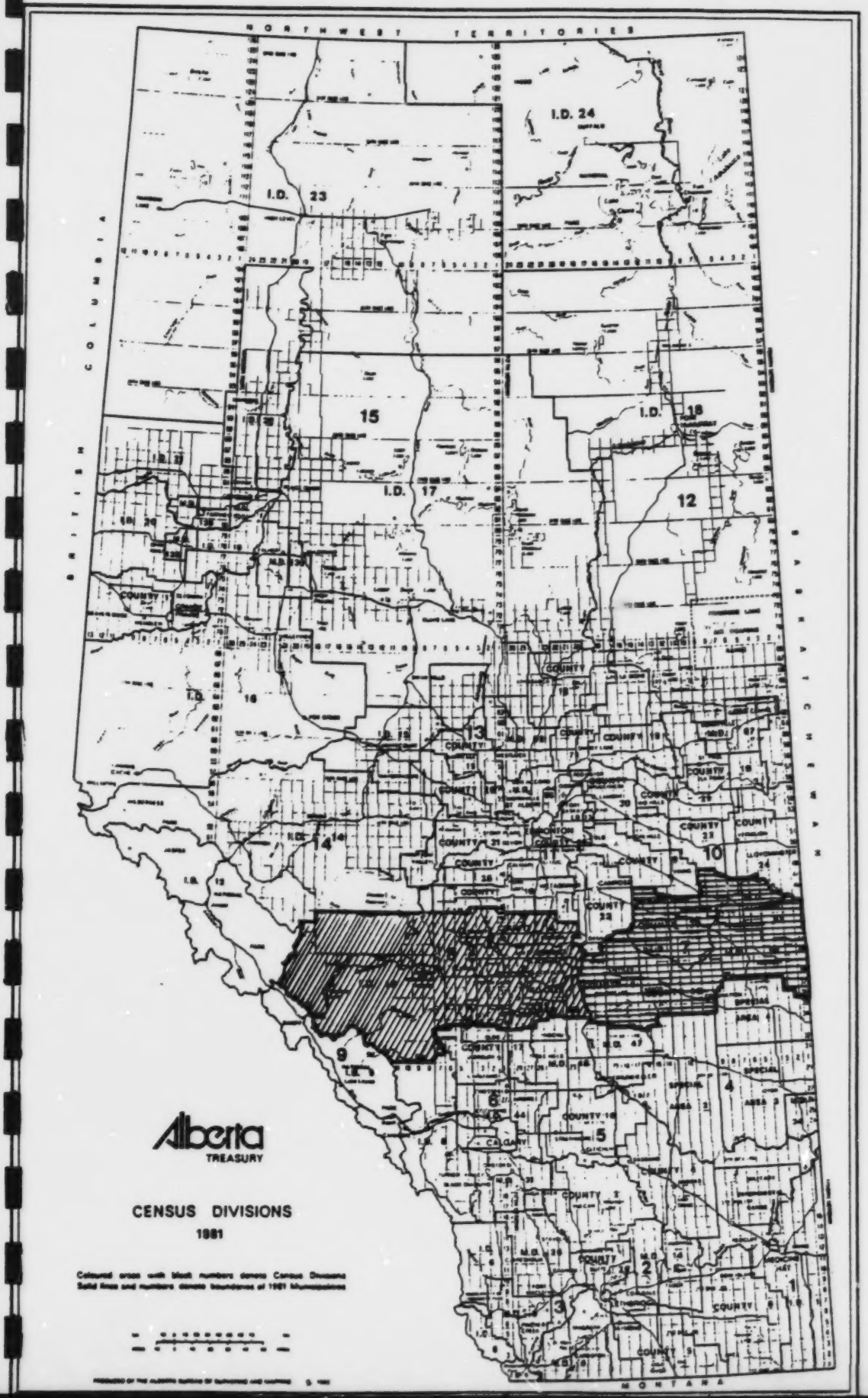

FIGURE 9.1

CENSUS DIVISION MAP

10.0 VIABILITY OF PROPOSED PACKAGES

The viability of the proposed concept packages were analyzed based on discussions with contractors, examinations of a builder's costs to complete an actual house and recent written and phone quotes for comparison pricing. The nature of pricing and the lack of hard data makes this exercise somewhat subjective and at times this analysis generalizes from impressions conveyed by industry sources. TABLE 10.1 summarizes advantages of the proposed packages utilizing both qualitative and quantitative data.

Prefabrication is examined separately in Section 11 as it is not integral to this concept.

Divisions 7 & 8 have been identified as the study areas and Red Deer, as the largest city in those divisions (as well as location of the study office), selected as the location from which operations would be conducted. The central source of operations could be any other location in these Divisions and the entity would not necessarily be a Red Deer builder or contractor. For the selected study area, the concentration of trades and suppliers in Red Deer is significant due to their numbers, size and location.

10.1 PACKAGE #1: BUILDING SHELL

Framing Materials: Competition will vary depending on specific items but in general a Red Deer builder can purchase materials in Red Deer and have them delivered to rural areas for the same price as buying from local rural suppliers. Most owner-builders would purchase at retail prices. Contractors generally receive a 5% discount from retail price while preferred contractors (ie.heavy volume) receive 10% discount from retail prices. These rules are not carved in stone. At least one rural supplier offers contractor prices to individuals for lumber packages to build their own houses.

Aside from price concerns, the experience of Red Deer builders is that they must also be concerned with material quality and availability from rural suppliers. For this reason, it is likely Red Deer sources would be utilized. The issue then becomes how much of a markup on materials the contractor requires for adequate profit and what is reasonable to remain competitive.

Framing Labour: It is unlikely a central source would maintain a cost advantage. As long as one person on the site is knowledgeable, he could supervise friends and relatives assisting an owner. As long as the plans are accurate and on-site changes not requested, good results should follow. If major modifications are requested, professional assistance is beneficial particularly if this affects future material packages (eg. window sizes are changed). Professional sources are generally quicker, leave less waste material and are better able to deal with newer technology (eg. whirlpool tubs, skylights, etc.) and trickier designs (eg. vaulted ceilings, sunrooms). A poor framing job often is not exposed until the drywall and cabinet stages when poor workmanship can become quite visible. Any delays in framing can lead to scheduling problems, cost overruns and damaged material (eg. underlay exposed to rain).

Windows: Windows are an item many rural builders would purchase from local lumberyards with a house package. City builders often buy from suppliers for a significant volume discount. The result is that a superior window can often be obtained for the same price paid in rural areas for an inferior window.

Roofing: Local materials and labour are likely price competitive and labour should be of competitive quality.

Drywall: Rural areas are competitive on materials. Taping is an item where quality control is vital and Red Deer sources would be preferred for this reason. Further, many rural areas lack qualified tapers. This is one item where an owner/builder faces a large markup as large volume discounts are demanded by city contractors.

Exterior siding, soffit, fascia and eavestroughing: These items are less expensive using city sources. Rural sources often use available products which may result in a less attractive job. If city suppliers are used, a better product can often be received for a competitive price even after mileage costs are added.

10.2 PACKAGE #2: SITE AND FOUNDATION SERVICES

Red Deer cribbers will generally travel 25 miles out of the city before they add $200-300 travel costs. Their job is labour intensive and they feel that although there is healthy competition in rural areas, they can still travel and remain competitive.

Concrete prices are significantly higher in rural areas than in Red Deer. However, there are significant travel costs which does not make it feasible to service rural areas from Red Deer. It appears many of the rural suppliers calculate their price by charging to slightly undercut city prices plus mileage from city.

The result is that there appears to be no appreciable price advantage to use Red Deer materials and labour although there are concerns as to quality, particularly if N.H.W.P. coverage is sought.

10.3 PACKAGE #3: ELECTRICAL SERVICES

A direct price comparison was done between servicing a house in Rocky Mountain House from Red Deer or from local sources. The prices were competitive. However, the purchase of electrical fixtures and appliances from Red Deer would allow the owner much better selection and better prices.

10.4 PACKAGE #4: PLUMBING SERVICES

As has been the experience of Red Deer builders, this is an area where they significantly undercut local competitors. The Rocky Mountain House quotes were at least 23% higher than Red Deer quotes. Use of Red Deer sources allows better selection as well as better labour and material costs.

10.5 PACKAGE #5: MECHANICAL SERVICES

Again using quotes, Red Deer sources provided a quote 23% lower than that of local sources. If an owner is price conscious, there is a greater likelihood that city tradesmen are better versed in recent energy-saving practices such as the R-2000 concept.

10.6 PACKAGE #6: PAINTING

Rural areas should always be competitive in this area as it is easy to hold yourself out to be an experienced or qualified painter. Red Deer builders often prefer use of Red Deer painters to ensure quality and consistency. Quality control is important as this is a very visible item and proper finishing of woodwork makes a significant impression on the quality of house.

10.7 PACKAGE #7: CABINETS AND VANITIES

At present, a Red Deer manufacturer services most of the major city builders and supplies them at retail price less 8%. It is difficult to compare his price and product to rural suppliers. From an owners perspective, he does supply the advantages of:

- good selection
- a display room
- kitchen design assistance
- warranty and after-sale service

10.8 PACKAGE #8: FLOOR FINISH

This is another area where city suppliers appear clearly superior in terms of price, selection and service. Large suppliers obtain volume discounts (better prices) and maintain a larger inventory (better selection). They generally have well-trained sales staff and installers. Many consumers are very sensitive to what they receive for flooring and after-sales service is important. City suppliers generally provide better installation service as well as after-sales service.

10.9 PACKAGE #9: INTERIOR FINISH

Similar to the material in package #1, a Red Deer contractor should be able to receive a preferred contractors price on these materials and be able to supply materials to the site at a cost lower than that of the owner-builder. Quality control is easier to ensure from one city supplier and this also reduces the danger of unavailibility of materials often experienced in smaller yards.

10.10 PACKAGE #10: EXTERIOR COMPLETION

This is a minor package in terms of cost and many of these items might be left by the owner to complete on his own at a later date. These items could be handled locally at competitive rates with the exception of precast steps where large discounts are available if a number of jobs are ordered at once.

10.11 OTHER FINANCIAL CONSIDERATIONS

Aside from the fixed costs which will be incurred by a professional contractor in the normal course of business, certain variable costs will be incurred on each home which are costs that are not incurred by an owner-builder and include the following:

New Home Warranty - It is not certain if this coverage can be obtained. If obtained, coverage would likely be more expensive than on a full house due to administrative costs. Current rates to enroll a home for the standard warranty are between $150-200 depending on the value of the home. This item is addressed in more depth later in the report.

Builder Warranty and Service costs - An estimate of this expense is 1/2 of 1% of construction costs or $500 on a $100,000 home. These are estimated costs which will likely be incurred in the first year following occupancy and a prudent builder will set these costs aside in anticipation of their occurrence. An owner-builder would likely not set a reserve and raise funds as required.

Construction Manager - It is estimated that one construction manager could supervise a maximum of 30 houses per year. At a salary of $30,000 this would equate to $1,000/house for his salary alone. Added to this would be vehicle costs and travelling expenses.

From the perspective of the owner, the following financial considerations must also be addressed:

Scheduling - Most owners do not appreciate the complexity of coordinating the scheduling of materials and labour. They are often left waiting when a subcontractor elects to work for a contractor who is more than a one-time client. One material or labour delay can dramatically affect both the cost and timing of the whole project. The result is increased stress and aggravation.

Cost - It is always less expensive to do something right the first time. If inexperienced labourers make a mistake, the result is either a poorer quality product or a time delay and financial expenditure to remedy the mistake. Any delays add to cost including damaged materials and financing charges.

TABLE 10.1 PACKAGE VIABILITY SUMMARY

Package Element	No Clear Advantage	Advantage Central Source	Advantage Rural/ Local Source	Extent of Advantage
1. Framing				
- Material		● (P,Q)		5 - 15%
- Labour	●	● (Q)	● (P)	
- Windows		● (P,Q)		10 - 20%
- Roofing	●			
- Drywall				
- Material	●			
- Taping		● (P,Q)		10 - 20%
- Exterior		● (P,Q,S)		10 - 20%
2. Site & Foundation Ser				
- within 25 mi radius		● (P,Q,W)		15 - 20%
-outside 25 mi radius		● (Q,W)	● (P)	
3. Electrical				
- Labour	●			
- Fixtures		● (P,Q,S)		5 - 25%
4. Plumbing		● (P,Q,S,SV)		20 - 25%
5. Mechanical Services		● (P)		20 - 25%
6. Painting		● (Q)		Significant
7. Cabinets/Vanities		● (S)		Significant
		● (Q,P,S,W)		Noticeable
8. Floor Finishing		● (P,S,SV,W,Q)		10 - 20 %
9. Interior Finish		● (P,Q,S)		Substantial
10. Exterior Completion			● (P)	Noticeable
11. Other				
- Warranty		● (NHWP)		
- Service		● (Q,L)	● (P)	
- Scheduling	●	● (S)	● (P)	
- Project Management		● (Q)		

Key P - Price S - Selection L - Labour W - Warranty
Q - Quality SV - Service M - Material

11.0 PRESENT METHODS EMPLOYED

11.1 PURCHASING A PREFABRICATED HOME

Although no builders are currently offering the envisioned concept, there are several pre-manufactured home suppliers. These companies offer a material package that contain the interior and exterior walls pre-manufactured in sections, and transported to the building site. The manufacturer guarantees that there is adequate material to build the home and may help the customer with some of the subtrade tendering. The company does not guarantee the workmanship needed to erect and complete the home, nor does it predict the costs of each of the various subtrades.

11.1.1 NELSON HOMES

The best known manufacturer of prefab homes in Western Canada is Nelson Great Western Homes ("Nelson"). This privately owned company has operated out of Lloydminister for 38 years and has sold more than 26,000 homes. Nelson employs a well-trained sales force which services Manitoba, Saskatchewan, Alberta and southern B.C..

Nelson offers two different catalogues of their products. The catalogues feature in excess of 50 homes; detailed specifications and options are included in a separate flyer. If you do not find the ideal plan, Nelson will mix and match features or design a home from scratch on their computer-aided design package. Blueprints are released once the package is purchased and subtrades may then be priced.

Nelson's product is geared to the rural market where most of their sales are obtained. Their product accommodates both the prospect who desires to hire a contractor or even be his own builder/contractor. The prefab package is delivered in two loads. The first load is delivered after the owner has arranged for excavation of the worksite and erection of the foundation. The first load contains all the framing materials up to but not including the windows. Assembly of the package is done without Nelson supervision. Most first-time builders hire a contractor, builder or framer to erect the package. A disadvantage of prefab sections is that all openings are framed making on-site renovations difficult. Further, the owner-builder must work around delivered materials and guard against theft.

While Nelson's promotional materials state that they will help you select a contractor and "keep in touch" during construction, the owner must arrange for the contractor and is responsible for the contractor's performance. Nelson guarantees to supply enough material to complete the home.

Once the first package is assembled (ie."lock-up" stage) the owner arranges to complete services such as electrical, heating and plumbing. The second load contains the windows, insulation, drywall, siding, soffit and the finishing materials required to complete the home. Kitchen cabinets and vanities are offered as an option.

11.1.2 VICEROY HOMES

Viceroy Homes ("Viceroy") is a publicly traded company (on the TSE) with a head office in Scarborough, Ontario. They have sales offices in major centres throughout Canada and Calgary is their head sales office for Western Canada. They reportedly sold 300 homes in Alberta last year and are particularly popular in areas such as Bragg Creek.

Viceroy uses a completed, furnished model home as a sales centre. As a starting point a potential home purchaser purchases the 1988 Viceroy Plan book which contains 76 homes varying in size from 624 to 3633 sq.ft.. A prospect also receives materials on the following:

1. Superwindow information- their windows are touted as the best windows in the world. The windows have solid vinyl exterior and a mahogany interior and carry a 20 year warranty covering defective materials.
2. Specification sheet for the material package.
3. A 14 page booklet on "What Viceroy Quality Means To You" which discusses quality of design, Superwindows, special roof trusses, exterior cedar,sliding doors, manufacturing quality and their warranty.
4. A price list for all 76 homes which runs from $47-55/sq.ft. for a completed home.

The actual Viceroy product appears similar to the Nelson product in some ways. Housing styles are quite attractive with an Eastern flavour and appear to appeal to rural commuters (eg. the Bragg Creek market). Their promotional materials stress the advantage of purchasing options such as sunrooms, greenhouses, skylights and sliding doors.

The owner is responsible for foundation preparation. A 1-inch thick manual accompanies the house package but use of a contractor is advised. The salesman stated they could help identify sub-contractors and suppliers and utilize their clout to obtain discount prices.

11.1.3 BEAVER LUMBER

Beaver Lumber is headquartered in Calgary and has lumber yards throughout Alberta. In an effort to sell lumber, Beaver, like other yards, offers the following products:

1. Pre-Fab Homes- Beaver provides prefab exterior and interior walls and roof components.
2. Material Supply Package- The only pre-manufactured component is the truss package and this package is thus less expensive. Materials are delivered as needed. This is the package they place their sales emphasis on.
3. Ready-To-Move Homes (RTMs)- the house is delivered and placed on a prepared foundation. Very few of these are sold.

The prefab packages extend to the lock-up stage. These packages might be preferred by urban owners with easier access to subtrades and suppliers to complete their home.

In summary, the prefab manufacturers offer a very similar product to each other. In contrast, the envisioned product differs significantly because of the versatility and the depth of the product offered. Athough the lumber package comprises a significant portion of the material costs in a house, labour to frame the house is the least expensive labour in the home. The packages proposed would provide the owner with access to competitively priced professional assistance from traditionally more expensive trades such as plumbers and electricians.

11.1.4 FOREIGN RURAL NEW HOME SUPPLIER

Miles Homes of Minneapolis, Minnesota ("Miles"), offers some of the services being considered. Miles assists the owner from two perspectives; financial assistance and construction.

Construction financing is available on an interim basis (18 to 24 months). Monthly interest-only payments are made with the principal being paid when permanent financing is placed, on completion of the home, with a financial institution. Interim financing is more difficult to obtain in the U.S. than in Canada. Without it construction often cannot commence until the lot is paid for, so interim financing is an important element in the construction process.

The owner-builder is supplied with a stick-material package which has been pre-cut for easier erection. Miles offers many services not offered by Alberta competitors. When blueprints are received, information is also provided on the procedure necessary to obtain a building permit. Additional assistance is provided with detailed, step-by-step instruction manuals to remove some of the anxieties of building your own home. It is recommended that tradesmen be hired for certain items (eg. plumbing, heating, electrical) but the owner is encouraged to do as much as desired.

Miles stresses the economy of building from their pre-cut packages which is appropriate since the only value added is cutting the materials and labelling for identification. Alternatively, they can prefab which is beneficial as it saves construction time. Since more value has been added, the cost increases.

Aside from offering the standard 2-load package (first-framing/exterior, second-interior) Miles offers these further services as options:

1. Framing Assistance Program: they arrange for a framing contractor to assist in framing.
2. Additional Materials: including carpeting, floor tiles, light fixture, kitchen cabinets, paint, bath accessories and more.

When compared with domestic sources, the Miles approach is quite similar to Nelson except that they give an owner-builder the option of selecting a stick package (pre-cut and labelled) or prefab package. From the perspective of a company contemplating the envisioned concept, either approach would require significant capital to obtain and maintain facilities. Whereas Miles stresses the savings of doing it yourself, the envisioned concept also offers the option of using professional sources and warranty coverage.

12.0 REQUIREMENTS FOR FACILITIES TO IMPLEMENT THE CONCEPT

Before finalizing the product to be offered, a trip was made to Lloydminister to examine the operations of Nelson Homes. Nelson sold 750 homes last year.

The prefab concept was a logical step for Nelson who commenced operations over 35 years ago as a lumberyard. A tour of the facility reveals a systematic expansion of operations and now several large buildings serve as storage and manufacturing facilities.

A brief outline of operations follows:

1. Plans are finalized by draftsman utilizing CAD systems and computer specifications are produced.
2. Materials are cut to required sizes.
3. Prefab assembly of walls takes place.
4. Trusses are assembled.
5. Windows are assembled or constructed.
6. The balance of materials are requisitioned and the total package prepared for shipping (in two separate loads).

A tour of the facilities reveals the logic of Nelson's diversification but also demonstrates the tremendous cost required to create and maintain such operations. The Nelson facilities can manufacture a complete Nelson home package in less than 5 hours.

For purposes of the envisioned concept, prefabrication is neither critical nor necessary. It is suggested that prefabrication should not be considered unless a sales level of 100 homes per annum can be achieved and successfully maintained. This level could likely not be obtained during the first 3 to 5 years of operations and, therefore, the concept will originally be designed so that facilities are not required for prefabrication. In fact, the presence of Nelson presents an opportunity as their prefab package could be included as part of the package presented to the owner. This would reduce the labour requirements to be supplied by the owner or contractor, but the balance of packages would still be available for the benefit of the owner.

13.0 MARKETING CONSIDERATIONS

To successfully market the proposed product, a long-term marketing plan would be required which would include marketing goals, marketing budget and in the correct mix to obtain goals. In determining the correct mix, consideration must be given to both advertising and sales promotion as well as the use of personal selling. For purposes of this section, it is assumed the package is economically viable and will be pursued.

13.1 MARKETING BUDGET

The marketing budget of a company attempting to market the proposed product must take into account the blend of that product with the rest of their products. It is assumed any company attempting the proposed product would be a builder and its marketing mix would not separate this product distinctly from other products but rather ensure that advertising would benefit its full product line. A budget is company specific but for purposes of this study an annual marketing budget of $18,000 is selected. In reality, this budget would continually be reassesed and updated depending on sales volumes. It must be remembered that word-of-mouth advertising might be the best form of advertising for this product. Such advertising will only arise after homes are built and homeowners are satisfied with the experience.

An estimated first year budget of $18,000 would be required and would be allocated as follows:

a. $1000- signs for construction sites
b. $3000-5000 media advertising
c. $12,000-14,000 catalogs and trade exhibits

Specific forms of marketing and advertising are discussed in subsequent sections.

13.2 ADVERTISING AND SALES PROMOTION

Given the location of the project proponent's operations (Red Deer), any advertising campaign would be aimed at potential homebuyers in Divisions 7 & 8. This group is large as it includes virtually anyone in these divisions over the age of 20. This target group is actually broader than actual homebuyers as it includes not only homebuyers but individuals who influence purchasing decisions.

The most common advertising media are:

1. Printed media: This includes local newspapers and magazines, direct mail, handbills and flyers (inexpensive and good coverage but short life and read hastily). Flyers should be distributed in any given target area. Once a home is under construction, local advertisements should follow and the house be used as a promotion centre. Use should also be made of farm journals and magazines with high subscription rates in rural areas.

2. Electronic media: While local radio and television are viable they are likely too expensive in early stages of development.

3. Other means: Telephone selling and direct mail offer audience selectivity but are expensive and often ignored. Telephone soliciting of buyer interest in a specific area could be a means of obtaining leads in virgin territory.

Sales promotion involves an effort to persuade buyers to accept the seller's information and store it in a retrievable form. Possible sales promotion activities to consider are:

1. Catalogs: Although these materials contain a wealth of information, they are very expensive to produce and therefore cannot be dispersed too freely. A catalogue should be produced and contain some homes and prices. The real purpose of the catalog is to introduce prospects to the concept developed.

2. Trade exhibits: Trade shows with a large rural component offer good potential. Attending such events would require preparation of materials and a trained salesperson on location. The preparation of a video presentation for these occassions should be considered.

13.3 PERSONAL SELLING

Personal selling involves direct face-to-face relationships between the seller and the prospect and will undoubtedly be the most crucial item of any marketing plan for this product. A home purchase is a very expensive and important decision which generally will not be made without a great deal of thought and information seeking. A well-trained salesperson is crucial to assist the prospect through this complicated decision process.

A well-trained salesperson should have thorough knowledge both of the product being offered as well as the competitor's product. This is quite important since this product is distinctly different from other products currently being offered. Since this product allows a large amount of user-involvement, a substantial amount of information must be transfered to the prospect without confusing him.

Specific benefits to be sold include cost savings, guaranteed completion dates, scheduling assistance, quality control, understanding of building codes, and the opportunity to contribute sweat-equity. The salesman should offer assistance in plan design and arrange for meetings between customer and draftsman, and site foreman. A diary system should be in place to ensure followup after possession. A directory of past customers and their homes should be in place.

13.4 SUMMARY OF MARKETING CONSIDERATIONS

In summary, the marketing mix will include a mixture of advertising, sales promotion and personal selling. This marketing mix will likely be part of the marketing plan of a company involved in construction and complement its other products. Once the product becomes successfully established, a shift will likely take place where more reliance would be placed on word-of-mouth advertising and personal selling and less reliance on other means of advertising.

14.0 SUMMARY OF ECONOMIC CONSIDERATIONS

14.1 ECONOMIC VIABILITY OF SERVICES AND SERVICE PACKAGES

Section 10 dealt with the viability of proposed packages on a package by package basis. In summary, most of the proposed packages can be competitive with, or superior to, rural competition in terms of both quality and price. We will now examine the proposed packages from the larger perspective of an individual house rather than individual packages.

Table 8.8 summarized the activities that owners would consider doing themselves. By analyzing the activities owners would consider themselves and taking an average of the individual activities, the average owner would undertake 17% of the activities required to build a home. This percentage of total activities to be undertaken is then assumed to be the value of total activities required to build a home.

The issue then becomes how much of the remaining 83% would be handled by the professional builder and subtrades coordinated through him and how much would be handled by subtrades hired by the owner directly. At this point the issue becomes cloudy as the answer is very dependent on the motivations of the owner.

If the owner is extremely price-conscious, he would likely shop for subtrades and compare prices with those offered by the contractor to see if he can receive a better price. If the owner is concerned with having control over the project, he again might prefer to hire his own subtrades. In both cases, the central source would receive less than 83% of the work and a decision made if enough of the project is being handled to justify involvement. On the other hand, if the motivation of the owner is simply to be more involved in construction and do some of the work himself, he will gladly allow the contractor to arrange subtrades for the balance of the house. Further, if the owner is quality- conscious, he might prefer to use the contractor and his subtrades and ensure high quality, good service and warranty coverage.

Good business practice dictates that contractor markup must be at least 15% to ensure that a company makes enough profit to stay in business. This is also the guideline used by N.H.W.P. who wish to ensure companies stay in business so they can service their warranties. If the company was only to receive several of the packages, it would be difficult to make sufficient profit on a 15% markup and consideration would have to be given to a larger markup in such instances. However, if more than 60% of the house is being controlled it should be feasible to operate on a 15% markup.

Will the market sustain such a markup? If the owner is only concerned with price, certain packages would be too expensive for him once the 15% markup is added. However this is generally the case when a contractor is utilized. Nevertheless, most packages should be competitive in price. It appears Nelson Homes and Viceroy Homes have a higher markup on their packages and they are very well received by the market. The packages envisioned and the overall concept offers value to the owner and it will essentially be a marketing problem to create awareness of the value. The product, as designed, should offer value at competitive prices. Further details of viability are presented for a more refined version of the concept in Section 16.

14.2 WARRANTY CONSIDERATIONS

A. Builder warranty:

As discussed in Section 10, the normal reserve for servicing a warranty is 1/2 of 1% or $500 on a $100,000 house. Since there will be extra travel costs associated with servicing rural homes, this should likely be increased to 3/4 of 1% to be prudent. If a builder pursues this concept successfully, this cost would decrease somewhat as increased travel will be necessary to build new homes and independent trips will not be required for servicing.

B. Subtrade warranty:

Each subtrade will be responsible for servicing his warranty and this will not be an expense incurred by the contractor. If subtrades are concerned with extra mileage, it will be reflected in their initial quotes.

C. New Home Warranty Program of Alberta:

The N.H.W.P. is a program initiated by the builders of Alberta committed to maintaining a high standard of quality of workmanship and materials in new home construction. The program ensures that the new home builder will provide a full year of warranty service and will repair or replace defective materials. The program also provides a five year structural warranty with an option available for ten years. Homes built by the members of this program are insured for up to $30,000.00.

One of the purposes of this study was to investigate ways of making the benefits of the New Home Warranty available to a broader spectrum of the home buying public. This might be possible if a qualified professional builder is supervising and inspecting all phases of construction. In essence the builder would be responsible for the work completed by the owner-builder and his hired subtrades. The builder will be supported by the N.H.W.P.

The N.H.W.P. has responded favourably to the contents of this study. Their mandate is to make their coverage available to as much of the market as possible and still ensure that quality new home construction takes place. They are concerned that the construction quality in many rural areas is substantially below what is expected in urban areas. The N.H.W.P. maintains strict criteria for membership which must be met by the builder regardless of location of operation. Few builders in rural areas are registered builders under N.H.W.P.

One advantage a registered builder may have is that certain financial institutions will not lend funds unless the home is built by a registered builder. This is particularly so in urban centres where the mortgage is to be insured by C.M.H.C. who wish to ensure their security is placed on a quality product. Lenders in rural areas, possibly because few registered builders are available, are more relaxed on their guidelines.

Meetings with N.H.W.P. officials identified the following issues for resolution:

1. Coverage: Registered builders must register each home they build under the program. The issue is to decide when the professional contractor has enough involvement to be considered the builder and therefore obliged to register. The rule-of-thumb is that the builder completes at least 50% of the home. If the builder receives the projected quantities of the work suggested by the survey, he would have well above 50%.

2. Premiums: At present no mechanism exists for payment of a partial fee to only cover certain portions of the home. Administratively, it would likely cost more to monitor and cover owner-led construction packages. Therefore it would seem that the builder must assume responsibility for owner performed aspects of the work.

3. Education: From both the perspective of the builder and the N.H.W.P., the rural market must become aware of the benefits of the program.

Until a builder is prepared to attempt this contemplated package, it is unlikely the N.H.W.P. will be any more committal on their position.

14.3 POSITION OF RED DEER HOME BUILDERS ASSOCIATION (R.D.H.B.A.)

This concept was discussed with the executive committee of the R.D.H.B.A.. Membership of the association consists of local homebuilders, suppliers and subtrades.

Their response was favourable for the following reasons:

1. Any operation as envisioned would benefit local builders, suppliers and subtrades since the new market would be serviced from Red Deer.

2. This concept could educate the non-Red Deer market on the benefits of utilizing professional builders and tradesmen.

3. This concept could further educate potential homebuilders on the benefits of N.H.W.P. coverage and the advantage of using registered members (most of the larger Red Deer builders are registered members).

The association noted the difficulties facing a builder contemplating such an operation. None of the difficulties noted were original and have already been covered in this report. Their primary concern was the difficulty that would be experienced if suppliers and subtrades became more active in direct dealings with owner-builders. This is unfounded since they are already dealing with owner-builders and, if anything, this concept might reduce the number of owner-builders they deal with. This element of the market will always exist and as difficult as it may be to service it, it must be done.

15.0 THE PRODUCT

Further analysis with respect to the construction sequence, logical grouping of similar tasks, economic viability and potential salability resulted in expanding and refining the packages conceptualized earlier in the report. The following presents the product package recommended for implementing this concept. It should be noted that experience with concept delivery will probably result in further refinements and recombinations.

15.1 Package #1: Design Assistance

Approximately 40% of the homes Nelson now manufactures are custom made based on plans produced by the owner. If a customer has his own plans, he should not pay for this service. Of the remaining 60%, the majority are modifications of standard catalog plans. This would not be possible without the aid of computerized drafting and this has given Nelson a competitive advantage.

For this concept to succeed, it is recommended that a computer-aided design package be acquired and a draftsman retained on a full-time basis. The beginning of a "team concept" would begin when the salesman and draftsman assist the owner in designing his dream home. Knowledge of what the owner wants is necessary and the builder must offer value to the owner. By assisting the owner in designing a home, care can be taken to ensure that design considerations are taken into account prior to the owner deciding on the home he is going to build. These considerations could include energy considerations, ease of construction, economy of construction, or appealing architectural features.

This item was previously covered in the blueprint item of the building shell package and represents less than 2% of the total construction project.

15.2 Package #2: Site and Foundation Services

Detailed checklist:

- Surveying certificate and stakeout
- Site clearing, excavation and backfill
- Removal or placement of landfill
- Gravel and concrete footings
- Wood or concrete foundation
- Tar, gravel, drainage tile, and sump
- Sand or gravel fill for floor

Leave as originally designed except:

- consider adding building permit as a service offered.
- consider a separate package for excavating since many rural customers might desire to do this themselves. If so, this would leave the foundation package as a separate item which might be desirable from a warranty perspective.

This phase represents approximately 17% of the total constructed project.

15.3 Package #3: Building Shell

This package should be reduced to only include:

- Beams, teleposts, joists and subfloor
- Exterior and interior walls and trusses
- Exterior wall sheathing
- Windows and exterior doors
- Roof sheathing and shingles
- All miscellaneous nails and hardware

Consideration should be given to offering an option where a framer would assist the owner who supplies the balance of labour. This would ensure quality control and address warranty concerns. This package represents approximately 20% of the completed project.

15.4 Package #4: Electrical Services

Detailed checklist:

- Power service installation
- Telephone service installation
- Electrical fixtures and appliances
- Security alarm systems
- Intercom systems

No changes are suggested except that appliances can be purchased at the builder's discount. The owner-builder has the option of hiring a local electrician or utilizing the electrician supplied by the builder. The builder's subtrade will often be hired because of better pricing and quality control. Electrical fixtures will generally be purchased through the builder's source allowing better price, selection and service. The electrical sub-contract represents approximately 3% of the completed project.

15.5 Package #5: Plumbing Services

Detailed checklist:

- Septic systems
- Water service installations
- Plumbing fixtures for all options
- Ceramic tile

A builder is equipped to alert the owner to the many products available and, perhaps more importantly, allow competitive access to these products. Plumbing fixtures are an item where huge volume discounts are given from wholesalers to plumbers and an owner is at a significant disadvantage. Salesmen should have brochures on the fixtures available and retail prices. Options could include coloured fixtures and products such as whirlpool tubs. The plumbing contract represents approximately 6% of the completed project.

15.6 Package #6: Mechanical Services

Detailed checklist:

- Furnaces and ductwork
- Hot water heating
- Solar heating
- Power humidifiers
- Air conditioning

No changes are suggested from the original package. A knowledgable builder is beneficial as there are many different furnaces and heating types. Consideration must be given to fuel type, cost efficiency, and comfort. A builder might be able to suggest energy saving methods and, if registered, even construct an R-2000 home. The heating sub-contract represents approximately 5% of the completed project.

The previous three packages are items the owner builder will generally not handle themselves (less than 13% for each in our survey). These items are also items which the central source should be able to provide at a significant cost advantage over local tradesmen and suppliers who do less volume.

15.7 Package #7: Exterior Package

This is logically a separate package and would include:

- Exterior siding or stucco
- Soffits and fascia
- Eavestroughing

There are many ways to complete the exterior of a house. Many owners are not that concerned with material supplied and that installation be perfect from a cosmetic standpoint. For those who are concerned, a builder should offer access to a broader range of materials, better colour selection, and professional installers. This package represents approximately 4% of the total house package.

15.8 Package #8: Insulation Package

Detailed checklist:

- Wall insulation
- Ceiling insulation
- Poly and caulking

This should be a separate package since many owners (24%) will elect to do this themselves and have their own ideas on the best way to do it. Consideration could be given to having "do-it-yourselfer' information available if the owner desires it. This represents about 3% of the total project.

15.9 Package #9: Drywall

Detailed Checklist:

- Supply drywall
- Install drywall
- Tape
- Texture

Drywall represents about 4% of total construction. This and items which follow are visible items where quality is a concern.

15.10 Package #10: Painting

Detailed checklist:

- Sealing and painting drywall
- Staining or painting interior doors
- Staining or painting railing and other woodwork
- Staining or painting exterior doors and windows
- Staining or painting sundecks

No change except the builder may wish to add supply of materials only as an option since this is the item most likely to be attempted by the owner. This is the item most likely to be done by the owner (35%) and represents approximately 4% of the value of the final product.

15.11 Package #11: Cabinets

Detailed checklist:

- Supply and installation of kitchen cabinets
- Supply and installation of bathroom cabinets
- Kitchen and bathroon counter tops

This item will seldomly be attempted by the owner. A builder using one source of supply can demand followup service and warranty for his product. Selection and service are generally better from a large central source with a showroom and a variety of product lines. This package represents approximately 6% of the completed project.

15.12 Package #12: Floor Finish

Detailed checklist:

- Supply and installation of carpets and underlay
- Supply and installation of linoleum
- Quarry tile
- Hardwood flooring

No changes are recommended for this package which represents 5% of the completed project. Again, a wider selection at better prices is often available through a central source. Warranties are a major concern which a larger builder should present as a factor in his favour.

15.13 Package #13: Interior Finish

Detailed checklist:

- Linoleum underlayment
- Interior doors, casing and baseboard
- Closet shelving and hardware
- Banister
- Fireplace and finish
- Panelling
- Bathroom hardware
- All nails and hardware

The finishing stages of the construction project are critical because poor workmanship is visible. Qualified finishing carpenters are difficult to find in rural areas. This is an area where builders often have people on staff because it is crucial to their reputation. The finishing stage represents 14% of the completed project.

15.14 Package #14: Exterior Completion

Detailed checklist:

- Parging
- Front and rear steps
- Sidewalks
- Driveway
- Grading and landscaping

Several of the items in this package are likely to be done by the owner (20% by survey results). Further, many of these items are completed after possession due to finances or finding time to complete. As set out above, this item represents 6% of the project but could be significantly larger if an exterior garage, fence, and extensive landscaping are added.

15.15 Package #15: After-Sales Package

This is a rather generic package and could include the following:

- -N.H.W.and/or builder warranty.
- -Final inspection with salesman &/or serviceman at the time of possession.
- -Periodic serviceman contacts (eg. 3 mth, 6 mth, 1 yr).
- -6 month followup by salesman.
- -A visit by company executive within 1 year of purchase.
- -Construction guides or information of assistance to owner (eg. furnace maintenance, landscaping, basement development) such package could be prepared in large part by suppliers and subtrades but still be distributed and personalized by the builder.
- -Membership in "owner-group" which entitles them to make future purchases (to complete home,renovate,landscape) through the builder for a discount.

We assume that the provision of a warranty constitutes 1% of the cost.

Although this product requires certain capital expenditures, it will not require a prohibitive initial investment. The product is flexible and offers the owner value. It offers the owner support yet affords him the freedom to make his own decisions. The builder also has flexibility since his price for each of his packages will take into account economic cosiderations. If a particular package is not desirable and could be handled better by the owner, the builder can act accordingly and still have the opportunity to obtain the contract for other packages.

16.0 ECONOMIC VIABILITY

Now that the product has been more clearly identified, economic viability can be considered in more detail. This concept is a generic concept which could be adopted by a central source from any location in the province. For purposes of this section, it will again be assumed that the central source is a builder in Red Deer concerned with the central Alberta territory.

16.1 TARGET MARKET

Earlier analysis honed in on Divisions 7 & 8 but it would be logical to also consider other areas included in the Red Deer trade area since these areas could also be serviced from Red Deer.

Population projections for the area call for a steady growth both in the the City of Red Deer as well as the balance of the trade area. The city is projected to continue to represent less than 40% of the area population, leaving a sizeable market outside the city limits.

It was earlier determined that the average number of building permits taken out per annum in Divisions 7 & 8 were 80 and 308 (excluding the City of Red Deer) respectively, for a total of 388 permits per annum. Without expanding our geographic area dramatically, we could also consider:

- Olds	18	(based on
- Didsbury	11	permits
- County of Mtn. View	47	taken
Total	76	in 1986)

We are now focused on an area serviceable from Red Deer where approximately 450 single family dwellings are built per annum. The issue then becomes what is a reasonable market share to seek for this concept. By extrapolating our survey results, approximately 2/3's of these homes (ie. 300 per annum) were built by owner-builders. This extrapolation may be biased by the fact survey areas were a distance away from Red Deer. However, the survey also revealed that almost 1/2 of the people who purchased an existing home would have built if a professional builder had been available. It thus seems reasonable to project that the market segment this product is aimed at consists of 300 homes per annum. Market share will be determined by how aggressively it is sought. The following targets seem reasonable:

1989 - 15 homes (3.4% of total, 5% of market segment)
1990 - 30 homes (6.7% of total, 10% of market segment)
1991 - 45 homes (10% of total, 15% of market segment)

By gearing up for these targets, the central source will have the opportunity to approach the market in an orderly and planned fashion. If desired market share can be obtained after three years, then consideration can be given to diversifying and consideration given to items such as:

- manufacturing of trusses and prefab walls
- expanding staff to eliminate some of the external subtrades
- increasing sales staff and marketing budget
- dealing directly with wholesalers rather than through suppliers for certain items

The logic for such diversification is that it should reduce the cost to the central source and allow it to add more of the value sought by the owner. Another benefit of such a move is ensuring supply. If diversification is sought to support this proposed product, then it cannot realistically be considered until a sales force is well established and a proven sales record exists to justify such a move.

16.2 TWO YEAR PLAN

Start-up costs for any central source will be as significant as they are for any new venture. Further, any new entrant must be willing to wait a reasonable time for the new venture to mature before assessing its success. The first two years of operations will be discussed.

16.2.1 EXPENSES

Identifiable costs for the first two years are listed below, and are based on estimates with inflation added in the second year.

	COSTS	
	1st Year	2nd Year
1. Computer Aided Design- These packages cost b/n $8000- 14000 including SW pkg ($2000- 3000), keyboard ($1000) & plotter ($5000- 10000). Costs are allocated to 1st year of operations although they could be amortized over 5 yrs.	10,000	-
2. Draftsman- $6- $12/hour depending on experience or $12000- 24000/annum.	20,000	22,000
3. Salesman- $1000/mth guarantee plus commission.	12,000	24,000
4. Operations (Superintendent)-	30,000	31,500
5. Marketing Budget- catalogues, brochures & ads.	18,000	18,000
6. Secretarial- $1300/mth.	15,360	16,000
7. Incorporation, Accounting, Legal-	2,000	2,300
8. Manager/Owner-	36,000	38,000
9. Vehicles- lease 1 for operations	12,000	13,000
10. Office Overhead- estimate $2000 per month the first 2 years.	24,000	25,000
TOTAL	179,360	189,800

16.2.2 SALES

Table 16.1 compares estimated central costs and prices with estimated prices to rural builders for comparable quality for a typical house.

TABLE 16.1 COMPARISON OF COSTS AND PRICES

Package	Central Cost	Central Price	Owner Price for Comparable Quality
1	1,200	1,380	1,800
2	10,200	11,730	13,500
3	12,000	13,800	15,600
4	1,800	2,070	2,340
5	3,600	4,140	4,510
6	3,000	3,450	3,990
7	2,400	2,760	3,140
8	1,800	2,070	2,420
9	2,400	2,760	3,010
10	2,400	2,760	2,190
11	3,600	4,140	4,550
12	3,000	3,450	3,850
13	8.400	9,660	10,500
14	3,600	4,140	4,440
15	600	690	1,900
	60,000	69,000	78,740

Note:

1. Central cost refers to the estimated cost to a central professional builder providing the envisaged service.

2. Central price refers to the price charged to an owner by the central service provider for the packages.

3. Owner price for comparable quality refers to the price that an owner would have to pay to have the work done to comparable quality to that provided by the central source.

Comparable quality is admittedly difficult to assess. In estimating average figures for the prices an owner-builder would have to pay to achieve comparable quality the following elements were considered:

1. Contractor discounts which range between 10 to 25 percent.

2. Familiarity with homebuilding of trades used by the central source.

3. Supply of the trade groups throughout the study area.

4, Typical delays encountered by owner builders in securing trades on time and in sequence as required.

This table explains how our analysis suggests that a central source could supply the complete product for $69,000, compared to the $78,740 that an owner- builder would have to spend to achieve comparable quality. Our survey suggested that an owner-builder would undertake 17% of the $69,000, the value of this work would be $11,730. Much of this would be in the form of sweat equity. Additionally, the survey suggested that the owner would want to direct 3% of the work to subcontractors of his own choice. Often these are friends or relatives who work in home building related trades. This represents an average of $2,076 based on the central price calculation.

If an owner builder used the central source to supply the remaining 80% of the new home, again based on the central price value, the value paid to the central source is $55,200. The hard cost to the central source would be $48,000, again based on the average 15% markup.

The values suggested in Table 16.1 are somewhat subjective. The markup paid to the central source are assumed to be a constant 15% for all areas of work. This need not necessarily be so. Some areas of work which involve skilled tradesmen may afford a higher markup. Some areas, such as supply items may carry a lesser markup. The average difference between the central price and the owner price for comparable quality is 14.1%. This is subject to the huge disparity of trades and supply prices suggested in rural areas. It is an average only. Therefore, the actual saving to the owner builder will vary somewhat from this value.

16.2.3 PRO FORMA FOR FIRST TWO YEARS

		1st Year		2nd Year
Sales ($55,200/unit)	(15)	828,000	(30)	1,656,000
Less Cost of Sales ($48,000/unit)		720,000		1,440,000
Gross Margin		107,000		216,000
Less Expenses		179,360		189,800
Net Income Before Taxes		(72,360)		26,200

Break Even Point (Expenses/Contribution Margin)

1st Year = 179,360/7,200 = 24.9 or 25 houses

2nd Year = 189,800/7,200 = 26.4 or 27 houses

A pro forma has not been prepared for the third year. Needless to say, expenses will be at least as great as year two and likely higher. If sales are at the 30 homes per year level and increasing, it would likely be necessary to increase office overhead, hire another operations man, and lease another vehicle. If projected market share of 45 homes is achieved, however, a profit will be realized.

With respect to above pro formas, it must be remembered that calculations are based on a stand-alone entity, when in fact such operation would likely be undertaken by an existing builder. If so, operations would be somewhat complementary and benefit existing line of business (eg. some prospects will simply like the builder and have the builder do 100% of the house).

17.0 CONCLUSION

1. There is a market for the product envisioned in the study.

2. The original product should be expanded to 15 packages to better reflect the construction sequence and offer more value.

3. Based on analysis, reasonable market share for the first three years of operations should result in sales of 15, 30 and 45 homes respectively.

4. The operation would run in a deficit position in the first year but be profitable in the second year if projected market share is obtained.

5. Since the competitive advantage of this concept is largely based on quality and service elements, the success of this concept is as dependant on successful marketing as it is on efficient operations.

6. In some instances cost will be decreased by the owner utilizing a contractor offering the proposed packages; in virtually all instances, quality of the finished product should be increased.

APPENDIX 1: SURVEY QUESTIONAIRE

My name is _____. We have obtained funding from the Alberta Municipal Affairs to determine the types of services people are using in building new homes. May I ask you a few questions: your answers will assist us in understanding trends and opportunities for the housing industry?

1. Have you recently built or purchased a new home?
   YES____(go to 4). NO____(go to #2).

2. Do you plan to build (or purchase) a new home in the next couple of years?
   BUILD____(go to #8). PURCHASE____(go to #3).
   No____ (go to #3).

3. Would you (build/have built) your own home if professional help were available to assist you in the process? YES____. (go to #9). NO____.
   (thank them for their time and terminate the interview).

4. Did you hire a builder to complete your home_____?
   (go to #3) or did you undertake the general contracting yourself?_____ (go to #5).

5. What were the reasons you contracted your own home? (go to #6)_____
   _____

6a. If you had to do it over, would you do your own general contracting? YES____, NO____,

6b. Why do you say this? (go to #7)_____
   _____

7. What work, if any, did you or family members (or friends) complete on the construction of the home? (go to #9)_____
   _____
   _____

8. Do you intend to hire a builder to organize the work and build your home, YES____ (thank them for their time and terminate the interview) Or do you intend to fulfill the function of the general contractor yourself. YES_____ ? (go to #9).

9. In addition to completing the general contracting yourself, which of the following activities do you and your family members (or friends) plan to do yourself as opposed to hiring a contractor to complete them on a fee basis?

____planning and drawings.
____site preparation. (clearing, surveying).
____excavation and backfill.
____wood or concrete basement.(circle one).
____framing or
____home package set-up.
____roofing.
____insulation.
____drywall boarding.
____drywall finishing.(fill and taping).
____painting.
____electrical.
____plumbing.
____heating.
____kitchen and bathroom cabinets.
____floor coverings.
____siding, exterior finish.
____finish carpentry.
____parging, sidewalks, driveway.
____other. (please specify.)_____
_____

10. What qualifications do you have in contracting your own home and doing the above work yourself? (go to #11) _____
_____

11. Do you work in the construction field? YES____. NO____ .SOME____ . Specifically? (go to #12).____
_____

12. It may be possible to develop a program whereby these job descriptions [in question #9] could be divided into supply and service packages. This means that you, as the general contractor, and with the help of a professional builder, would be able to complete or subcontract the jobs that you choose. The remaining work could be completed by the builder. If a certified builder completes certain specific tasks on a new home, the home can be enrolled under the New Home Warranty Program of Alberta. Would such a modified program be of interest to you? YES____. NO____.
NOT SURE _____
_____

Thank them for their time and terminate the interview.

APPENDIX II: SURVEY RESULTS

A/ Stettler

In the Town of Stettler 175 interviews were conducted. The results of the survey are as follows:

1. Have you recently built or purchased a new home?

   14 of the 175 families interviewed (8%) had built their own home while 4 families (2.3%) had purchased an existing home.

2. Do you plan to build (or purchase) a new home in the next couple of years?

   8 families (4.6%) have plans to build a new home while 5 families (2.9%) intend to purchase one.

3a. Would you build your own home if professional help were available to assist you in the process?

   Of the 162 respondents with no plans to build, 20 families (12.3%) stated they would build if they could have professional assistance to do so.

3b. Would you have built your own home if professional help were available to assist you in the process?

   1 of the 4 families (25%) who had purchased an existing home stated they would have built, rather than purchased, their new home if a professional contractor had been available to assist them.

4. Did you hire a builder to complete your home or did you undertake the general contracting yourself?

   Of those families who built their own homes, 8 families (57.1%) hired a general contractor. 6 families (42.9%) acted as their own general contractor.

5. What were the reasons you contracted your own home?

   Various reasons were cited. However, all 6 families who contracted their own homes felt it would be less expensive.

6a. If you had to do it over, would you do your own general contracting?

All 6 families were satisfied with the result and stated they would not hesitate to build their own home again.

6b. Why do you say this?

Various reasons were cited but in particular all respondents felt they saved money by being their own contractor. However, some respondents questioned whether in fact they truly saved money.

7. What work, if any, did you or family members (or friends) complete on the construction of the home?

2 families (14.1%) did their own plans, site preparation, excavation and backfill.
3 families (37.5%) did their own framing, roofing, insulating and painting.
1 family completed their basement, did the drywall boarding and taping, the electrical services, floor covering, siding, and finish carpentry. The remaining subtrades were all hired out.

8. Do you intend to hire a builder to organize the work and build your home, or do you intend to fulfill the function of the general contractor yourself? (ie. for respondents planning to build in the next couple of years).

Of those who were planning to build, 3 families (37.5%) planned to hire a general contractor while 5 families (62.5%) intend to act as their own general contractor.

9. In addition to completing the general contracting yourself, which of the following activities do you and your family members (or friends) plan to do yourself as opposed to hiring a contractor to complete them on a fee basis?

To maximize responses to this question, responses to questions #1, 2, 3, 4, 7, & 8 (a total of 56 responses) are combined. Thus, the respondents include:

a) those who recently built or purchased a new home:
   i) those who hired a builder but would have built if professional help were available.
   ii) those who were their own general contractor.

b) those who did not recently build or purchase a new home:
   i) those who plan to build and be their own general contractor.
   ii) those who plan to buy but would have built if professional help were available.

19.6%__planning and drawings.
14.3%__site preparation. (clearing, surveying).
16.1%__excavation and backfill.
19.6%__wood basement.
21.4%__concrete basement.
39.3%__framing
21.4%__home package set-up.
33.9%__Roofing.
23.2%__insulation.
28.6%__drywall boarding.
33.9%__drywall finishing.(fill and taping).
37.5%__painting.
19.6%__electrical.
12.5%__plumbing.
 5.4%__heating.
19.6%__kitchen and bathroom cabinets.
16.1%__floor coverings.
21.4%__siding, exterior finish.
17.9%__finish carpentry.
19.6%__parging, sidewalks, driveway.
 1.8%__other. (please specify.)_styrofoam_____

10. What qualifications do you have in contracting your own home and doing the above work yourself?

    Of the 56 families who were interested in completing the work themselves 37 families (66%) had some experience related to construction. The telephone survey method was not appropriate to investigate the extent of this experience.

11. Do you work in the construction field?

    Few of the respondents (11 out of 37, 30%) were directly employed in construction.

12. It may be possible to develop a program whereby these job descriptions [in question #9] could be divided into supply and service packages. This means that you, as the general contractor, and with the help of a professional builder, would be able to complete or subcontract the jobs that you choose. The remaining work could be completed by the builder. If a certified builder completes certain specific tasks on a new home, the home can be enrolled under the New Home Warranty Program of Alberta. Would such a modified program be of interest to you?

    Of the 31 families who completed the interview to completion, 20 (65%) favoured the concept and, in addition, most added a favourable comment on the concept.

    9 families (29%) answered no while 2 families (6%) were not sure.

B/ Delburne

In the Village of Delburne 50 interviews were conducted. The results of the survey are as follows:

1. Have you recently built or purchased a new home?

   8 families interviewed (16%) had built their own home while 2 families (4%) had purchased an existing home.

2. Do you plan to build (or purchase) a new home in the next couple of years?

   8 families (16%) have plans to build a new home while 2 families (4%) intend to purchase one.

3a. Would you build your own home if professional help were available to assist you in the process?

   Of the 46 respondents with no plans to build, 8 families (17.4%) stated they would build if they could have professional assistance to do so.

3b. Would you have built your own home if professional help were available to assist you in the process?

   1 of the 2 families (50%) who had purchased an existing home responded they would have built their new home if a professional contractor had been available to assist them.

4. Did you hire a builder to complete your home or did you undertake the general contracting yourself?

   Of those families who built their own homes, 2 families (25%) hired a general contractor. 6 families (75%) contracted their homes themselves.

5. What were the reasons you contracted your own home?

   Of the 6 families who contracted their own homes in Delburne, 5 families, (83.3%) stated that they felt it would be less expensive.

6a. If you had to do it over, would you do your own general contracting?

5 families of those that were interviewed felt it was indeed less expensive to build themselves. 1 stated they would never attempt it again.

6b. Why do you say this?

Again, there were several reasons. Price savings was cited as the main reason although some respondents questioned the actual savings.

7. What work, if any, did you or family members (or friends) complete on the construction of the home?

1 family (12.5%) completed their own excavation and backfill.
2 families (25%) did their own planning and blueprints, basements, insulating, floor covering, and exterior completion.
3 families (37.5%) completed their own roofing plumbing, heating, siding, and finish carpentry.
4 families (50%) did the site preparation and electrical.
5 families (62.5%) completed the painting themselves.

8. Do you intend to hire a builder to organize the work and build your home, or do you intend to fulfill the function of the general contractor yourself?

Of the 2 families who were planning to build, 1 family (50%) planned to hire a general contractor while 1 family intended to act as their own general contractor.

9. In addition to completing the general contracting yourself, which of the following activities do you and your family members (or friends) plan to do yourself as opposed to hiring a contractor to complete them on a fee basis?

In order to get the most responses possible for this question, responses are included to questions 1, 2, 3, 4, 7, and 8, a total of 32 respondents.

3.1%__planning and drawings.
9.4%__site preparation. (clearing, surveying).
6.3%__excavation and backfill.
3.1%__wood basement.
9.4%__concrete basement.
15.6%__undecided on wood or concrete basement
9.4%__framing
0.0%__home package set-up.
3.1%__Roofing.
3.1%__insulation.
6.3%__drywall boarding.
6.3%__drywall finishing.(fill and taping).
21.8%__painting.
12.5%__electrical.
9.4%__plumbing.
0.0%__heating.
0.0%__kitchen and bathroom cabinets.
9.4%__floor coverings.
3.1%__siding, exterior finish.
3.1%__finish carpentry.
3.1%__parging, sidewalks, driveway.
0.0%__other. (please specify.)

10. What qualifications do you have in contracting your own home and doing the above work yourself?

    Out of the 32 families who were interested in completing the work themselves 23 families (72%) had some experience related to construction.

11. Do you work in the construction field?

    4 families (12.5) were directly involved in the construction field.

12. It may be possible to develop a program whereby these job descriptions [in question #9] could be divided into supply and service packages. This means that you, as the general contractor, and with the help of a professional builder, would be able to complete or subcontract the jobs that you choose. The remaining work could be completed by the builder. If a certified builder completes certain specific tasks on a new home, the home can be enrolled under the New Home Warranty Program of Alberta. Would such a modified program be of interest to you?

    Of the 16 families who completed the interview to completion, 8 (50%) favoured the concept. Again, most added a favourable comment.

    5 families (31%) answered no while 3 families (19%) were not sure.

C/ **Erskine**

10 interviews were conducted in the Hamlet of Erskine. The results of the survey are as follows:

1. Have you recently built or purchased a new home?

   2 families interviewed (20%) had built their own home while 2 families (20%) had purchased an existing home.

2. Do you plan to build (or purchase) a new home in the next couple of years?

   None of the families interviewed had any plans to build or purchase an existing home.

3a. Would you build your own home if professional help were available to assist you in the process?

   Of the 10 respondents with no plans to build, 3 families (30%) stated they would build if they could have professional assistance to do so.

3b. Would you have built your own home if professional help were available to assist you in the process?

   Of the 2 families who had purchased an existing home, neither of them would have built even if professional help were available.

4. Did you hire a builder to complete your home or did you undertake the general contracting yourself?

   Of the 2 families who built their own homes, 1 family hired a general contractor and 1 family acted as their own general contractor.

5. What were the reasons you contracted your own home?

   The family that contracted their own home stated that they wanted to maintain control of the complete construction project.

6a. If you had to do it over, would you do your own general contracting?

The 1 family that did complete their own home stated that they would do it over, however, they would do things differently.

6b. Why do you say this?

This family enjoyed the experience but made the usual mistakes that comes from lack of experience.

7. What work, if any, did you or family members (or friends) complete on the construction of the home?

There was only 1 family that built themselves. They completed their own wood basement, painting, floor covering and exterior finishing.

8. Do you intend to hire a builder to organize the work and build your home, or do you intend to fulfill the function of the general contractor yourself?

None of the respondents currently plan to build.

9. In addition to completing the general contracting yourself, which of the following activities do you and your family members (or friends) plan to do yourself as opposed to hiring a contractor to complete them on a fee basis?

In order to get the most responses possible for this question, responses are included to questions 1, 2, 3, 4, 7, and 8, a total of 32 respondents.

10%__planning and drawings.
10%__site preparation. (clearing, surveying).
10%__excavation and backfill.
10%__wood basement.
 0%__concrete basement.
20%__undecided on wood or concrete basement
10%__framing
 0%__home package set-up.
10%__Roofing.
10%__insulation.
10%__drywall boarding.
10%__drywall finishing.(fill and taping).
20%__painting.
 0%__electrical.
 0%__plumbing.
 0%__heating.
 0%__kitchen and bathroom cabinets.
20%__floor coverings.
10%__siding, exterior finish.
20%__finish carpentry.
20%__parging, sidewalks, driveway.
 0%__other. (please specify.)

10. What qualifications do you have in contracting your own home and doing the above work yourself?

    There was no construction experience or qualifications of those interviewed

11. Do you work in the construction field?

    None of the respondents worked in the construction field.

12. It may be possible to develop a program whereby these job descriptions [in question #9] could be divided into supply and service package packages. This means that you as the general contractor, and with the help of a professional builder, would be able to complete or subcontract the jobs that you choose. The remaining work could be completed by the builder. If a certified builder completes certain specific tasks on a new home, the home can be enrolled under the New Home Warranty Program of Alberta. Would such a modified program be of interest to you?

    Out of 3 families who responded to this question, 1 (33%) favoured the concept, 1 (33%) was not interested, and 1 (33%) was uncertain.

D/ County of Stettler

165 interviews were conducted in the County of Stettler. The results of the survey are as follows:

1. Have you recently built or purchased a new home?

   17 of the 165 families interviewed (10.3%) had built their own home while 5 families (3%) had purchased an existing home.

2. Do you plan to build (or purchase) a new home in the next couple of years?

   2 families (1.2%) have plans to build a new home while 3 families (1.8%) intend to purchase one.

3a. Would you build your own home if professional help were available to assist you in the process?

   Of the 160 respondents with no plans to build, 37 families ((23.1%) stated they would build if they could have professional assistance to do so.

3b. Would you have built your own home if professional help were available to assist you in the process?

   4 of the 5 families (80%) who had purchased an existing home stated they would have built, rather than purchase, their new home if a professional contractor had been available to assist them.

4. Did you hire a builder to complete your home or did you undertake the general contracting yourself?

   Of the 17 families who built their own homes, 2 families (11.8%) hired a general contractor while 15 families (88%) acted as their own general contractor.

5. What were the reasons you contracted your own home?

   Consistent with other submarkets, the primary reason given for contracting your own home was perceived saving of money.

6a. If you had to do it over, would you do your own general contracting?

All the families stated they would do their own general contracting again if they chose to build again.

6b. Why do you say this?

Again, most felt they had saved money.

7. What work, if any, did you or family members (or friends) complete on the construction of the home?

Many families participated in the construction process. See the percentage break-down in question 9.

8. Do you intend to hire a builder to organize the work and build your home, or do you intend to fulfill the function of the general contractor yourself?

2 families had plans to build their own home and both felt they would build their own home rather than hire a general contractor.

9. In addition to completing the general contracting yourself, which of the following activities do you and your family members (or friends) plan to do yourself as opposed to hiring a contractor to complete them on a fee basis?

In order to get the most responses possible for this question, responses are included to questions 1, 2, 3, 4, 7, and 8, a total of 87 respondents.

24%__planning and drawings.
23%__site preparation. (clearing, surveying).
17%__excavation and backfill.
8%__wood basement.
7%__concrete basement.
6%__undecided on wood or concrete basement
22%__framing
3%__home package set-up.
31%__Roofing.
33%__insulation.
22%__drywall boarding.
13%__drywall finishing.(fill and taping).
40%__painting.
10%__electrical.
9%__plumbing.
9%__heating.
6%__kitchen and bathroom cabinets.
6%__floor coverings.
28%__siding, exterior finish.
12%__finish carpentry.
26%__parging, sidewalks, driveway.
0%__other. (please specify.)

10. What qualifications do you have in contracting your own home and doing the above work yourself?

    Of the 87 families who were interested in completing the work themselves, 59 families (68%) who responded felt that they had enough experience with construction to enable them to build their own home.

11. Do you work in the construction field?

    26 families worked in the construction field in various capacities.

12. It may be possible to develop a program whereby these job descriptions [in question #9] could be divided into supply and service packages. This means that you as the general contractor, and with the help of a professional builder, would be able to complete or subcontract the jobs that you choose. The remaining work could be completed by the builder. If a certified builder completes certain specific tasks on a new home, the home can be enrolled under the New Home Warranty Program of Alberta. Would such a modified program be of interest to you?

    49 families responded to this question. 36 (73.5%) were in favor, 7 (14.3%) were not interested and 6 families (12.1%) were uncertain.

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